



PCT09

## RAW SEQUENCE LISTING

DATE: 02/21/2003

PATENT APPLICATION: US/09/701,675A

TIME: 10:06:12

Input Set : N:\Crf4\01222003\I701675.raw

Output Set: N:\CRF4\02212003\I701675A.raw

1 <110> APPLICANT: BANDMAN, Olga  
 2 LAL, Preeti  
 3 TANG, Y. Tom  
 4 CORLEY, Neil C.  
 5 GUEGLER, Karl J.  
 6 BAUGHN, Mariah R.  
 7 PATTERSON, Chandra  
 8 <120> TITLE OF INVENTION: Cell Cycle Regulation Proteins  
 9 <130> FILE REFERENCE: PF-0531 USN  
 10 <140> CURRENT APPLICATION NUMBER: US/09/701,675A  
 11 <141> CURRENT FILING DATE: 2002-10-02  
 12 <150> PRIOR APPLICATION NUMBER: PCT/US99/12906  
 13 <151> PRIOR FILING DATE: 1999-06-08  
 14 <150> PRIOR APPLICATION NUMBER: 60/088,695  
 15 <151> PRIOR FILING DATE: 1998-06-08  
 16 <160> NUMBER OF SEQ ID NOS: 35  
 17 <170> SOFTWARE: PERL Program  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 197  
 21 <212> TYPE: PRT  
 22 <213> ORGANISM: Homo sapiens  
 23 <220> FEATURE:  
 24 <221> NAME/KEY: misc\_feature  
 25 <223> OTHER INFORMATION: Incyte ID No: 037377  
 26 <400> SEQUENCE: 1

ENTERED

27	Met	Leu	Val	Leu	Pro	Ser	Pro	Cys	Pro	Gln	Pro	Leu	Ala	Phe	Ser
28	1				5					10					15
29	Ser	Val	Glu	Thr	Met	Glu	Gly	Pro	Pro	Arg	Arg	Thr	Cys	Arg	Ser
30					20					25					30
31	Pro	Glu	Pro	Gly	Pro	Ser	Ser	Ser	Ile	Gly	Ser	Pro	Gln	Ala	Ser
32					35					40					45
33	Ser	Pro	Pro	Arg	Pro	Asn	His	Tyr	Leu	Leu	Ile	Asp	Thr	Gln	Gly
34					50					55					60
35	Val	Pro	Tyr	Thr	Val	Leu	Val	Asp	Glu	Glu	Ser	Gln	Arg	Glu	Pro
36					65					70					75
37	Gly	Ala	Ser	Gly	Ala	Pro	Gly	Gln	Lys	Lys	Cys	Tyr	Ser	Cys	Pro
38					80					85					90
39	Val	Cys	Ser	Arg	Val	Phe	Glu	Tyr	Met	Ser	Tyr	Leu	Gln	Arg	His
40					95					100					105
41	Ser	Ile	Thr	His	Ser	Glu	Val	Lys	Pro	Phe	Glu	Cys	Asp	Ile	Cys
42					110					115					120
43	Gly	Lys	Ala	Phe	Lys	Arg	Ala	Ser	His	Leu	Ala	Arg	His	His	Ser
44					125					130					135

## RAW SEQUENCE LISTING

DATE: 02/21/2003

PATENT APPLICATION: US/09/701,675A

TIME: 10:06:12

Input Set : N:\CrF4\01222003\I701675.raw

Output Set: N:\CRF4\02212003\I701675A.raw

```

45      Ile His Leu Ala Gly Gly Gly Arg Pro His Gly Cys Pro Leu Cys
46                      140                      145                      150
47      Pro Arg Arg Phe Arg Asp Ala Gly Glu Leu Ala Gln His Ser Arg
48                      155                      160                      165
49      Val His Ser Gly Glu Arg Pro Phe Gln Cys Pro His Cys Pro Arg
50                      170                      175                      180
51      Arg Phe Met Glu Gln Asn Thr Leu Gln Lys His Thr Arg Trp Lys
52                      185                      190                      195
53      His Pro
55 <210> SEQ ID NO: 2
56 <211> LENGTH: 225
57 <212> TYPE: PRT
58 <213> ORGANISM: Homo sapiens
59 <220> FEATURE:
60 <221> NAME/KEY: misc_feature
61 <223> OTHER INFORMATION: Incyte ID No: 162871
62 <400> SEQUENCE: 2
63      Met Ala Glu Gly Glu Thr Glu Ser Pro Gly Pro Lys Lys Cys Gly
64      1                      5                      10                      15
65      Pro Tyr Ile Ser Ser Val Thr Ser Gln Ser Val Asn Leu Met Ile
66                      20                      25                      30
67      Arg Gly Val Val Leu Phe Phe Ile Gly Val Phe Leu Ala Leu Val
68                      35                      40                      45
69      Leu Asn Leu Leu Gln Ile Gln Arg Asn Val Thr Leu Phe Pro Pro
70                      50                      55                      60
71      Asp Val Ile Ala Ser Ile Phe Ser Ser Ala Trp Trp Val Pro Pro
72                      65                      70                      75
73      Cys Cys Gly Thr Ala Ser Ala Val Ile Gly Leu Leu Tyr Pro Cys
74                      80                      85                      90
75      Ile Asp Arg His Leu Gly Glu Pro His Lys Phe Lys Arg Glu Trp
76                      95                      100                      105
77      Ser Ser Val Met Arg Cys Val Ala Val Phe Val Gly Ile Asn His
78                      110                      115                      120
79      Ala Ser Ala Lys Val Asp Phe Asp Asn Asn Ile Gln Leu Ser Leu
80                      125                      130                      135
81      Thr Leu Ala Ala Leu Ser Ile Gly Leu Trp Trp Thr Phe Asp Arg
82                      140                      145                      150
83      Ser Arg Ser Gly Phe Gly Leu Gly Val Gly Ile Ala Phe Leu Ala
84                      155                      160                      165
85      Thr Val Val Thr Gln Leu Leu Val Tyr Asn Gly Val Tyr Gln Tyr
86                      170                      175                      180
87      Thr Ser Pro Asp Phe Leu Tyr Val Arg Ser Trp Leu Pro Cys Ile
88                      185                      190                      195
89      Phe Phe Ala Gly Gly Ile Thr Met Gly Asn Ile Gly Arg Gln Leu
90                      200                      205                      210
91      Ala Met Tyr Glu Cys Lys Val Ile Ala Glu Lys Ser His Gln Glu
92                      215                      220                      225
94 <210> SEQ ID NO: 3
95 <211> LENGTH: 236

```

## RAW SEQUENCE LISTING

DATE: 02/21/2003

PATENT APPLICATION: US/09/701,675A

TIME: 10:06:12

Input Set : N:\Crf4\01222003\I701675.raw

Output Set: N:\CRF4\02212003\I701675A.raw

```

96 <212> TYPE: PRT
97 <213> ORGANISM: Homo sapiens
98 <220> FEATURE:
99 <221> NAME/KEY: misc_feature
100 <223> OTHER INFORMATION: Incyte ID No: 236062
101 <400> SEQUENCE: 3
102   Met Leu Ser Lys Gly Leu Lys Arg Lys Arg Glu Glu Glu Glu Glu
103       1             5             10             15
104   Lys Glu Pro Leu Ala Val Asp Ser Trp Trp Leu Asp Pro Gly His
105               20             25             30
106   Ala Ala Val Ala Gln Ala Pro Pro Ala Val Ala Ser Ser Ser Leu
107               35             40             45
108   Phe Asp Leu Ser Val Leu Lys Leu His His Ser Leu Gln Gln Ser
109               50             55             60
110   Glu Pro Asp Leu Arg His Leu Val Leu Val Val Asn Thr Leu Arg
111               65             70             75
112   Arg Ile Gln Ala Ser Met Ala Pro Ala Ala Ala Leu Pro Pro Val
113               80             85             90
114   Pro Ser Pro Pro Ala Ala Pro Ser Val Ala Asp Asn Leu Leu Ala
115               95             100            105
116   Ser Ser Asp Ala Ala Leu Ser Ala Ser Met Ala Ser Leu Leu Glu
117               110            115            120
118   Asp Leu Ser His Ile Glu Gly Leu Ser Gln Ala Pro Gln Pro Leu
119               125            130            135
120   Ala Asp Glu Gly Pro Pro Gly Arg Ser Ile Gly Gly Ala Ala Pro
121               140            145            150
122   Ser Leu Gly Ala Leu Asp Leu Leu Gly Pro Ala Thr Gly Cys Leu
123               155            160            165
124   Leu Asp Asp Gly Leu Glu Gly Leu Phe Glu Asp Ile Asp Thr Ser
125               170            175            180
126   Met Tyr Asp Asn Glu Leu Trp Ala Pro Ala Ser Glu Gly Leu Lys
127               185            190            195
128   Pro Gly Pro Glu Asp Gly Pro Gly Lys Glu Glu Ala Pro Glu Leu
129               200            205            210
130   Asp Glu Ala Glu Leu Asp Tyr Leu Met Asp Val Leu Val Gly Thr
131               215            220            225
132   Gln Ala Leu Glu Arg Pro Pro Gly Pro Gly Arg
133               230            235
135 <210> SEQ ID NO: 4
136 <211> LENGTH: 351
137 <212> TYPE: PRT
138 <213> ORGANISM: Homo sapiens
139 <220> FEATURE:
140 <221> NAME/KEY: misc_feature
141 <223> OTHER INFORMATION: Incyte ID No: 1596581
142 <400> SEQUENCE: 4
143   Met Ile Thr Asp Ala Leu Thr Ala Ile Ala Leu Tyr Phe Ala Ile
144       1             5             10             15
145   Gln Asp Phe Asn Lys Val Val Phe Lys Lys Gln Lys Leu Leu Leu

```

## RAW SEQUENCE LISTING

DATE: 02/21/2003

PATENT APPLICATION: US/09/701,675A

TIME: 10:06:12

Input Set : N:\Cr4\01222003\I701675.raw

Output Set: N:\CRF4\02212003\I701675A.raw

146		20		25		30
147	Glu Leu Asp Gln Tyr Ala Pro Asp Val Ala Glu Leu Ile Arg Thr					
148		35		40		45
149	Pro Met Glu Met Arg Tyr Ile Pro Leu Lys Val Ala Leu Phe Tyr					
150		50		55		60
151	Leu Leu Asn Pro Tyr Thr Ile Leu Ser Cys Val Ala Lys Ser Thr					
152		65		70		75
153	Cys Ala Ile Asn Asn Thr Leu Ile Ala Phe Phe Ile Leu Thr Thr					
154		80		85		90
155	Ile Lys Gly Ser Ala Phe Leu Ser Ala Ile Phe Leu Ala Leu Ala					
156		95		100		105
157	Thr Tyr Gln Ser Leu Tyr Pro Leu Thr Leu Phe Val Pro Gly Leu					
158		110		115		120
159	Leu Tyr Leu Leu Gln Arg Gln Tyr Ile Pro Val Lys Met Lys Ser					
160		125		130		135
161	Lys Ala Phe Trp Ile Phe Ser Trp Glu Tyr Ala Met Met Tyr Val					
162		140		145		150
163	Gly Ser Leu Val Val Ile Ile Cys Leu Ser Phe Phe Leu Leu Ser					
164		155		160		165
165	Ser Trp Asp Phe Ile Pro Ala Val Tyr Gly Phe Ile Leu Ser Val					
166		170		175		180
167	Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe Trp Tyr Phe Phe Ala					
168		185		190		195
169	Glu Met Phe Glu His Phe Ser Leu Phe Phe Val Cys Val Phe Gln					
170		200		205		210
171	Ile Asn Val Phe Phe Tyr Thr Ile Pro Leu Ala Ile Lys Leu Lys					
172		215		220		225
173	Glu His Pro Ile Phe Phe Met Phe Ile Gln Ile Ala Val Ile Ala					
174		230		235		240
175	Ile Phe Lys Ser Tyr Pro Thr Val Gly Asp Val Ala Leu Tyr Met					
176		245		250		255
177	Ala Phe Phe Pro Val Trp Asn His Leu Tyr Arg Phe Leu Arg Asn					
178		260		265		270
179	Ile Phe Val Leu Thr Cys Ile Ile Ile Val Cys Ser Leu Leu Phe					
180		275		280		285
181	Pro Val Leu Trp His Leu Trp Ile Tyr Ala Gly Ser Ala Asn Ser					
182		290		295		300
183	Asn Phe Phe Tyr Ala Ile Thr Leu Thr Phe Asn Val Gly Gln Ile					
184		305		310		315
185	Leu Leu Ile Ser Asp Tyr Phe Tyr Ala Phe Leu Arg Arg Glu Tyr					
186		320		325		330
187	Tyr Leu Thr His Gly Leu Tyr Leu Thr Ala Lys Asp Gly Thr Glu					
188		335		340		345
189	Ala Met Leu Val Leu Lys					
190		350				
192	<210> SEQ ID NO: 5					
193	<211> LENGTH: 757					
194	<212> TYPE: PRT					
195	<213> ORGANISM: Homo sapiens					

## RAW SEQUENCE LISTING

DATE: 02/21/2003

PATENT APPLICATION: US/09/701,675A

TIME: 10:06:12

Input Set : N:\Crf4\01222003\I701675.raw

Output Set: N:\CRF4\02212003\I701675A.raw

196 &lt;220&gt; FEATURE:

197 &lt;221&gt; NAME/KEY: misc\_feature.

198 &lt;223&gt; OTHER INFORMATION: Incyte ID No: 1853196

199 &lt;400&gt; SEQUENCE: 5

```

200 Met Ser Glu Asn Ser Ser Asp Ser Asp Ser Ser Cys Gly Trp Thr
201 1 5 10 15
202 Val Ile Ser His Glu Gly Ser Asp Ile Glu Met Leu Asn Ser Val
203 20 25 30
204 Thr Pro Thr Asp Ser Cys Glu Pro Ala Pro Glu Cys Ser Ser Leu
205 35 40 45
206 Glu Gln Glu Glu Leu Gln Ala Leu Gln Ile Glu Gln Gly Glu Ser
207 50 55 60
208 Ser Gln Asn Gly Thr Val Leu Met Glu Glu Thr Ala Tyr Pro Ala
209 65 70 75
210 Leu Glu Glu Thr Ser Ser Thr Ile Glu Ala Glu Glu Gln Lys Ile
211 80 85 90
212 Pro Glu Asp Ser Ile Tyr Ile Gly Thr Ala Ser Asp Asp Ser Asp
213 95 100 105
214 Ile Val Thr Leu Glu Pro Pro Lys Leu Glu Glu Ile Gly Asn Gln
215 110 115 120
216 Glu Val Val Ile Val Glu Glu Ala Gln Ser Ser Glu Asp Phe Asn
217 125 130 135
218 Met Gly Ser Ser Ser Ser Ser Gln Tyr Thr Phe Cys Gln Pro Glu
219 140 145 150
220 Thr Val Phe Ser Ser Gln Pro Ser Asp Asp Glu Ser Ser Ser Asp
221 155 160 165
222 Glu Thr Ser Asn Gln Pro Ser Pro Ala Phe Arg Arg Arg Arg Ala
223 170 175 180
224 Arg Lys Lys Thr Val Ser Ala Ser Glu Ser Glu Asp Arg Leu Val
225 185 190 195
226 Ala Glu Gln Glu Thr Glu Pro Ser Lys Glu Leu Ser Lys Arg Gln
227 200 205 210
228 Phe Ser Ser Gly Leu Asn Lys Cys Val Ile Leu Ala Leu Val Ile
229 215 220 225
230 Ala Ile Ser Met Gly Phe Gly His Phe Tyr Gly Thr Ile Gln Ile
231 230 235 240
232 Gln Lys Arg Gln Gln Leu Val Arg Lys Ile His Glu Asp Glu Leu
233 245 250 255
234 Asn Asp Met Lys Asp Tyr Leu Ser Gln Cys Gln Gln Glu Gln Glu
235 260 265 270
236 Ser Phe Ile Asp Tyr Lys Ser Leu Lys Glu Asn Leu Ala Arg Cys
237 275 280 285
238 Trp Thr Leu Thr Glu Ala Glu Lys Met Ser Phe Glu Thr Gln Lys
239 290 295 300
240 Thr Asn Leu Ala Thr Glu Asn Gln Tyr Leu Arg Val Ser Leu Glu
241 305 310 315
242 Lys Glu Glu Lys Ala Leu Ser Ser Leu Gln Glu Glu Leu Asn Lys
243 320 325 330
244 Leu Arg Glu Gln Ile Arg Ile Leu Glu Asp Lys Gly Thr Ser Thr

```

**RAW SEQUENCE LISTING ERROR SUMMARY**  
**PATENT APPLICATION: US/09/701,675A**

DATE: 02/21/2003  
 TIME: 10:06:13

Input Set : N:\Crf4\01222003\I701675.raw  
 Output Set: N:\CRF4\02212003\I701675A.raw

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:11; N Pos. 269,285,295,312,366,375,378,397,406,428,495,501,503,586,592  
 Seq#:11; N Pos. 610,613,643  
 Seq#:13; N Pos. 25,152,166,169,173,174,180,183,186,192,193,198,200,205,220  
 Seq#:13; N Pos. 230,233,236,243,246,251,285,307,309,310,317,319,329,344,345  
 Seq#:13; N Pos. 377,475,485,556,573,583,594  
 Seq#:15; N Pos. 34,59,60,134,168,311,314,344,347,354,364,391,393,401,407  
 Seq#:15; N Pos. 413,416,426,445,446,447,453,454,459,471  
 Seq#:16; N Pos. 119,501  
 Seq#:17; N Pos. 372,374,445  
 Seq#:18; N Pos. 462,485,510,514,550,562,602,617,622,625,629,636  
 Seq#:19; N Pos. 13,19,21  
 Seq#:20; N Pos. 406,435  
 Seq#:21; N Pos. 122,144,266,273  
 Seq#:22; N Pos. 22,25,32,106,123,126,135,208,216,219,234,236,263,271,282  
 Seq#:22; N Pos. 287,292,358,360,363,365,379,412,441,452,459,483,485,499,500  
 Seq#:23; N Pos. 8,17,24,27,33,36,43,246  
 Seq#:24; N Pos. 8  
 Seq#:25; N Pos. 419,435,453,462,463,471,476,513,516,563,585,586,597,611,618  
 Seq#:25; N Pos. 652,661,680,684,685,692,693,701,714,725,731  
 Seq#:26; N Pos. 213,223,369,406,423,469,475,490,494,498,524,548,570,574,582  
 Seq#:26; N Pos. 584,594,597,605,607  
 Seq#:27; N Pos. 94,104,149,167,215,226,232,275,298,301,312,333,362,364,367  
 Seq#:27; N Pos. 376,391,392,395,412,415,419,429,435,443,449,452,462,463,464  
 Seq#:27; N Pos. 466,467,468,470,476,485,489,492,502,514,529,533,541,550,557  
 Seq#:27; N Pos. 558,567,572,574,577,580  
 Seq#:29; N Pos. 234  
 Seq#:30; N Pos. 162,163  
 Seq#:31; N Pos. 121  
 Seq#:32; N Pos. 88  
 Seq#:33; N Pos. 190,336,351,413,420,423,432,441,449,454,462,510,520,524,530  
 Seq#:33; N Pos. 552,555,557,560,561,569,574,584,585,594,596,611,614  
 Seq#:35; N Pos. 91

**Invalid Line Length:**

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:11; Line(s) 500  
 Seq#:13; Line(s) 542  
 Seq#:15; Line(s) 581  
 Seq#:22; Line(s) 729  
 Seq#:25; Line(s) 790  
 Seq#:26; Line(s) 817  
 Seq#:27; Line(s) 842

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/701,675A

DATE: 02/21/2003  
TIME: 10:06:13

Input Set : N:\Crf4\01222003\I701675.raw  
Output Set: N:\CRF4\02212003\I701675A.raw

Seq#:33; Line(s) 956

## VERIFICATION SUMMARY

DATE: 02/21/2003

PATENT APPLICATION: US/09/701,675A

TIME: 10:06:13

Input Set : N:\Crf4\01222003\I701675.raw

Output Set: N:\CRF4\02212003\I701675A.raw

L:508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:240  
M:341 Repeated in SeqNo=11  
L:547 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
M:341 Repeated in SeqNo=13  
L:585 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
M:341 Repeated in SeqNo=15  
L:607 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:60  
M:341 Repeated in SeqNo=16  
L:634 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:360  
M:341 Repeated in SeqNo=17  
L:658 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:420  
M:341 Repeated in SeqNo=18  
L:675 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0  
L:698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:360  
M:341 Repeated in SeqNo=20  
L:716 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:120  
M:341 Repeated in SeqNo=21  
L:734 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
M:341 Repeated in SeqNo=22  
L:757 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0  
M:341 Repeated in SeqNo=23  
L:775 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0  
L:800 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:360  
M:341 Repeated in SeqNo=25  
L:824 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:180  
M:341 Repeated in SeqNo=26  
L:849 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:60  
M:341 Repeated in SeqNo=27  
L:891 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:180  
L:908 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:120  
L:925 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:120  
L:942 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:60  
L:963 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:180  
M:341 Repeated in SeqNo=33  
L:999 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:60